

REMARKS

In the above-identified office action, the Examiner has rejected claims 1-3 as being anticipated by Guthrie et al.. Further, claims 5 and 6 have been rejected as unpatentable over Guthrie et al. while claim 7 has been rejected as unpatentable over Guthrie et al in view of Kajiwara et al. The examiner has noted that the applicants do not claim the structure that requires that the gap be maintained. Applicants note that in the original claim 1 there was recited a gap securing means for securing a gap between the retainer ring and the chuck. Applicants have amended this so that it is now more definite reciting a gap securing means for maintaining a gap. As such, Applicants believe that the examiner is erroneous in the rejection and as such, claims 1-3 should be allowable over the art of record.

In case of one of the embodiments of the present invention, the wafer chuck 19 is fixed to a plate rubber, as shown in Figures 2 and 3, and therefore, even when an abnormal force is applied in the lateral direction during the course of polishing, the wafer chuck 19 is not easily moved in the lateral direction. On the other hand, because the retainer ring 23 is supported by the airbag 17 and the spring 18, when an abnormal force is applied in the lateral direction during the course of polishing, there is the possibility that the retainer ring 23 will move excessively in the lateral direction.

In this embodiment, as shown in Figs. 2 and 3 and described in the specification, since the ball plungers 21 are provided inside of the retainer frame 36, a gap between the retainer ring 23 and the chuck 19 in the lateral direction is maintained within a prescribed range.

In a second embodiment of the subject invention, since the bellows are provided at the wafer chuck 19 side, there is the possibility that the wafer chuck 19 might move excessively in the lateral direction by an abnormal force during high-speed rotation. Therefore, as shown in Figs. 4 and 5 and described in the specification, by the provision of the guide pins 41 and 44 and the guide pin receivers 38, 39, the gap between the retainer ring 43

and the wafer check 19 in the lateral direction can be maintained within a prescribed range during the course of polishing.

Therefore, because the gap is maintained between the retainer ring 23 and the wafer chuck 19 if the wafer is attached with precision to the wafer chuck, the wafer does not contact the retainer ring 3 and therefore the wafer edge can be kept from damage.

On the other hand, in Guthrie et al., as shown in Figure 3 and described in col. 7, lines 57-62, since the chuck 114 is supported by the bellows 118, when an abnormal force is applied in the lateral direction to the chuck 114 during the course of polishing, there is the possibility that the chuck 114 will move too much in the lateral direction.

Accordingly, in Guthrie, even though the chuck 114 can move in the lateral direction, the outer circumference of the wafer supported by the chuck 114 contacts the inner circumference of the retaining ring 162 (Fig. 4) so that the chuck 114 is restrained from further outward movement.

Guthrie, as described in col. 12, lines 5-8, the gap between the retaining ring 162 and the substrate is 0.03 inches or less, which is set, as a matter of course, on the premise that the retaining ring contacts the substrate.

As stated above, according to the present invention, when the head body is rotated by the rotary drive shaft, the gap between the retainer ring 23 and the wafer check 19 in the direction perpendicular to the rotary drive shaft can be maintained within a prescribed range. Thus, the wafer edge does not contact the retainer ring 23 and the wafer edge can be prevented from being damaged.

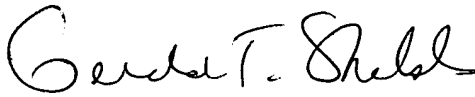
Guthrie's structure does not prevent such damage.

Kajiware discloses a mechanism with a retaining ring that is freely rotatable by a bearing etc. However, as amended claim 1 cannot be obvious over the combination of Guthrie and Kajiware, as Kajiware does not disclose the missing elements, such as the gap securing means.

Applicant hereby request reconsideration and reexamination thereof.

With the above amendments and remarks, this application is consideration ready for allowance and Applicant earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he is respectfully requested to call the undersigned at the below listed number.

Respectfully submitted,
WELSH & KATZ, LTD.



Gerald T. Shekleton
Registration No. 27,466

Dated: **January 16, 2007**
WELSH & KATZ, LTD.
120 South Riverside Plaza
22nd Floor
Chicago, Illinois 60606-3913
Telephone: (312) 655-1500
Facsimile: (312) 655-1501